WELCOME TO THE GARRISON COMMANDER'S SUSTAINABILITY BREAKFAST

February 15, 2006

OBJECTIVES

- Sustainability Air Goal and Current Status
- Air Emission Sources
- Accomplishments
- Challenges

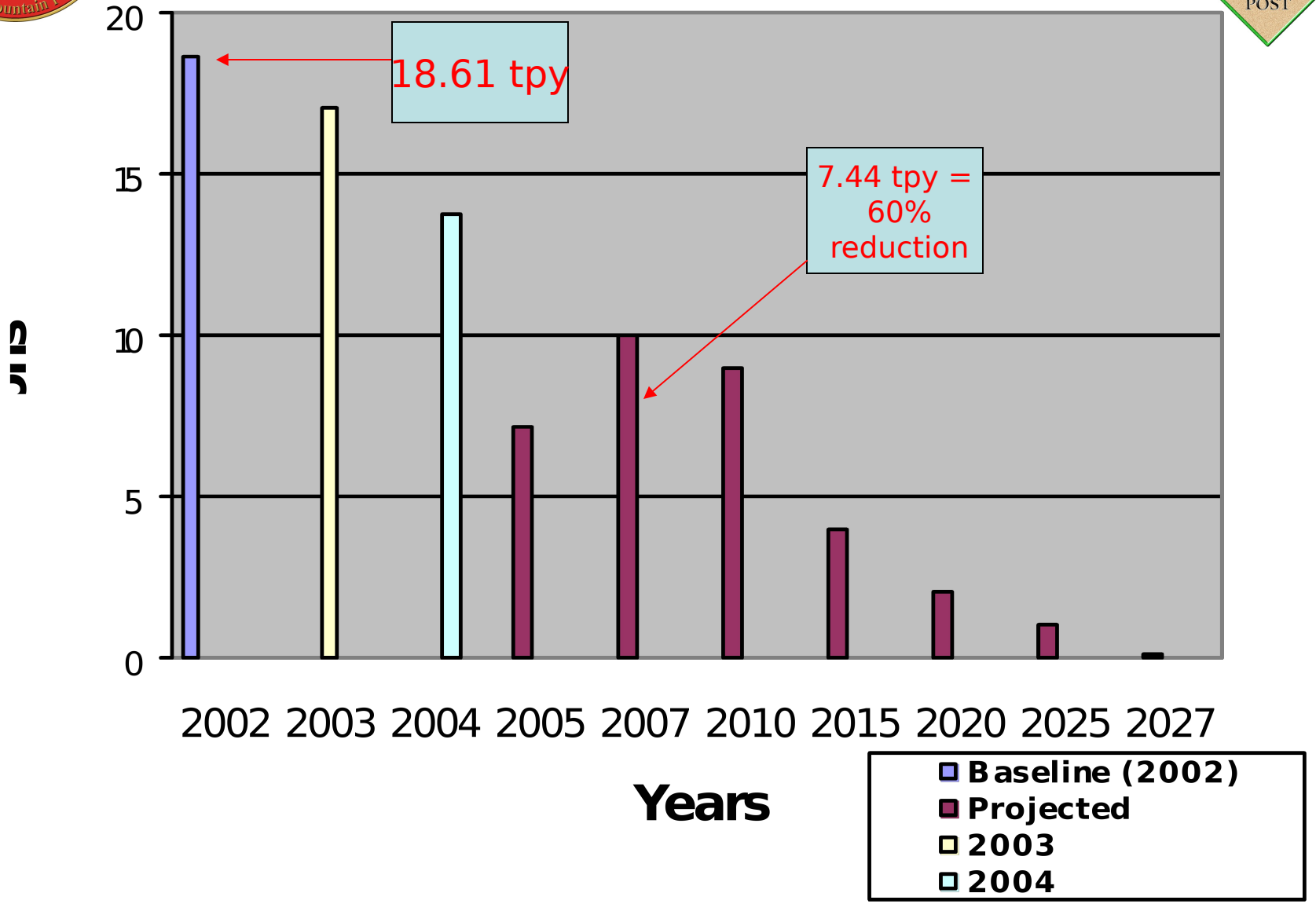
SUSTAINABILTY AIR GOAL #5

Reduce Hazardous Air Pollutant (HAP) emissions by:

- **60% by 2007**
- **100% by 2027**

- ❑ Decrease use of hazardous materials containing HAPs.
- ❑ Partner with AAFES to stock environmentally-friendly materials.
- ❑ Coordinate between local organizations to encourage recycling and reuse.
- ❑ Consider total environmental and social costs in cost analyses
- ❑ Share product life-cycle costs from user to producer.
- ❑ Influence suppliers to provide products with increased shelf-lives and decreased hazardous content

Actual HAP Emissions



AIR EMISSION SOURCES

- **Military Training:** smoke/obscurants, open burning/open detonation, ammunition
- **Particulate Emissions:** abrasive blasting, cooling towers, tank trails, haul ed burning

- **Combustion:** boilers, emergency generators, dynamometers (engine/transmissior testing)

- **Fuel Storage Tanks**

AIR EMISSION SOURCES

- **Refrigerants:** air conditioners, chillers, walk-in refrigerators

- **Chemical/Solvent Use:** vehicle/weaponry maintenance, paint striping operations, X-rays

SUCCESSES

2004 HAP emissions were 26% less in 2004 when compared to 2003

	Projected 2005	2004 (in tons)	2003
Paint Striping	.47	0.46	4.18
Bldg 8000 Paint Booths	.128 (less paint use and no MEK for cleaning)	1.88	3.63

INITIATIVES IMPLEMENTED

Building 8000 (DOL):

- ❑ Using low-volatile organic compound (VOC)/HAP chemical agent resistant compound (CARC) paint for tactical vehicles.
- ❑ Product substitution for cleaning paint guns/thinning paints.

Post-wide:

- ❑ Using low-VOC/HAP paint for traffic striping operations (DPW).
- ❑ Removing solvents/cleaners/lubricants not approved for purchase
- ❑ Conducting extensive P2 evaluation.

OPTIONS TO EXPLORE

Vehicles

- ❑ Mass transit - alternative fueled buses;
- ❑ Electric vehicles – employee use
- ❑ Hydrogen fuel cell powered trucks

Housing

- ❑ Gasoline vs. electric lawnmowers

Construction vehicles

- ❑ Biodiesel, modifications

Military Training

- ❑ Remove carcinogenic HCE smokepots

Chemical Use

- ❑ Environmentally friendly cleaning alternatives

Painting operations

- ❑ Training
- ❑ New High Performance High Volume Low Pressure (HPHVLP) spray equipment;
- ❑ Water-borne CARC paint;
- ❑ Formulation of conventional paint coatings;
- ❑ New state-of-the-art paint booth

CHALLENGES

- Increased population on FTC due to BRAC.
- Waterborne traffic striping paint was not durable, created economic and safety issues.
- Ability to obtain funding (ie paint booth).
- Alternative materials are slow to be approved/difficult to obtain.
- Technology-driven, acceptance of substitute materials and business practice changes.
- Some vendors go directly to motor pools/Soldiers. Need to exert more influence on what suppliers provide.
- Perception that alternative products perform poorly.
- Coordination.

LARGEST HAP EMISSION SOURCES (2004)

- **External Combustion Sources:** 3.86 tons (28% of total HAPs)
  - Insignificant boilers w/standard burner configuration = 2.41 of 3.86 tons.

- **Chemical Usage:** 2.54 tons (18% of total HAPs)
  - Basewide chemical usage = 1.12 tons and pesticide use = .94 tons of 2.54 tons.

CONCLUSION

Reaching our Sustainability Goals requires a **team effort**.

Desired end states include **cleaner air** for everyone in the community, **better working conditions** for those at Fort Carson, and a **healthier regional**

SUSTAINABILITY GOALS RELATING TO AIR ISSUES

- Goal #1 – Sustainable Energy
- Goal #2 – Transportation
- Goal #3 – Improve Communication
- Goal #4 – Sustainability Partnerships
- Goal #5 – Zero Hazardous Air Pollutants
- Goal #9 – Sustainable Procurement